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## Role of Self-Efficacy in the Relationship Between Patient-Provider Relationships and Psychological Insulin Resistance Among Patients with Type 2 Diabetes

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### Abstract

Psychological insulin resistance (PIR) affects patients' self-care behaviors and quality of life due to the delay of insulin treatment for optimal glycemic control. Although effective patient-provider communication and relationships have been shown to improve patients' overall treatment adherence and attitude toward treatment, little is known about the potential mechanisms by which effective patient-provider communication and relationships decrease PIR and whether these relationships are mediated by diabetes self-efficacy. The purpose of this study is to examine whether diabetes self-efficacy among patients with type 2 diabetes (T2D) mediates the relationships between PIR and perceived patient-provider relationships. A total of 178 patients with T2D participated in a cross-sectional study. Data were obtained by patient interview using validated measures of diabetes attitude, diabetes knowledge, self-efficacy, and patient-provider communication. PIR was measured by using a validated measure, Barriers to Insulin Treatment. A structural equation model was developed to estimate direct and indirect effects of patient-provider relationship on PIR when self-efficacy was controlled as a mediator. Diabetes knowledge and attitude were not significantly associated with PIR. Better patient-provider relationship was directly associated with lower PIR ( $\beta = -.40$ ,  $p = 0.008$ ). When diabetes self-efficacy was included as a mediator, the direct effect between patient-provider relationship and PIR changed ( $\beta = -.27$ ,  $p = 0.034$ ), indicating that better patient-provider relationship that reduces PIR is due to greater diabetes self-efficacy. The findings suggest that development of intervention programs aimed at improving diabetes self-efficacy—which may be positively correlated with better patient-provider relationship—is needed to reduce PIR.

### Keywords

psychological insulin resistance; self-efficacy; patient-provider relationship; mediator

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### Conflicts of Interest

The authors declare that they have no potential conflicts of interest relevant to this article.

## 1. Introduction

Type 2 diabetes (T2D) is a chronic illness that requires continual health care and active patient self-management to prevent long-term complications and acute complications. Although substantial research has shown that diabetes treatment through oral agents and lifestyle modification improves glycemic control and prevents diabetes complications, a large percentage of T2D patients will eventually require exogenous insulin therapy to achieve and maintain recommended targets for glycemic control given the progressive nature of this disease (U.K. prospective diabetes study 16. overview of 6 years' therapy of type II diabetes: A progressive disease. U.K. prospective diabetes study group.1995; Intensive blood-glucose control with sulphonylureas or insulin compared with conventional treatment and risk of complications in patients with type 2 diabetes (UKPDS 33). UK prospective diabetes study (UKPDS) group.1998). Unfortunately, many T2D patients are reluctant to start insulin treatments—often termed “psychological insulin resistance” (PIR) (Polonsky, Fisher, Guzman, Villa-Caballero, & Edelman, 2005). Prevalence of PIR has been reported as a range from 30% to 50%, across various settings (e.g., community and hospitals) and in studies including observational studies and randomized controlled trials (United kingdom prospective diabetes study (UKPDS). 13: Relative efficacy of randomly allocated diet, sulphonylurea, insulin, or metformin in patients with newly diagnosed non-insulin dependent diabetes followed for three years.1995; Peyrot et al., 2005).

The delay of insulin initiation for significant periods of time in patients with T2D not meeting glycemic target goals resulting from PIR prolongs poor glycemic control, may increase diabetes complications and impair quality of life. Factors affecting PIR include patients' demographics: Women and ethnic minorities tend to have more PIR compared to their counterparts, and patient beliefs, attitudes, and knowledge about diabetes and its treatment (Machinani, Bazargan-Hejazi, & Hsia, 2013; Nam, Chesla, Stotts, Kroon, & Janson, 2010; Polonsky et al., 2005). There are also misconceptions about insulin treatment. Many patients perceive insulin treatment as a personal failure of their diabetes self-management and that insulin treatment may cause serious negative consequences such as blindness or amputation (Polonsky et al., 2005). Not only patients' diabetes knowledge and attitude toward diabetes but also health care providers' attitude toward diabetes and their communication style influence patients' self-management adherence (Egede & Michel, 2002; Puder & Keller, 2003). Some providers reported that they doubted the efficacy of diabetes treatment and a lack of confidence in insulin treatment and treatment for other diabetes related complications (Brown et al., 2002).

Studies show that patients receive a message from providers, implying that insulin would be the last resort in diabetes treatment (Meece, 2006). Accepting insulin treatment seems to be challenging for patients who have worked hard for their diabetes care for many years. A good patient-provider relationship predicts better diabetes self-management and outcomes (Heisler, Bouknight, Hayward, Smith, & Kerr, 2002; Schillinger et al., 2003). Similarly, ineffective provider communication is associated with more barriers to patients' diabetes self-management and poorer treatment adherence (Ciechanowski, Katon, Russo, & Walker, 2001).

Patient's diabetes self-efficacy is shown to be a predictor of medication adherence and associated with other psychosocial variables such as attitudes, perceived relationship with health care providers, perceived social support, and quality of life (Celano, Beale, Moore, Wexler, & Huffman, 2013; Sarkar, Fisher, & Schillinger, 2006). Studies have also found that self-efficacy is a potential mediator in the relationship among treatment adherences and various psychosocial variables such as social support and depression (Kadden & Litt, 2011; Sacco et al., 2007; Tovar, Rayens, Gokun, & Clark, 2013); however, the mechanism in PIR and its relationship with other modifiable factors— self-efficacy and patient-provider relationship remains unknown. Understanding such factors associated with PIR may improve patients' ability to agree to the therapy and to participate in self-management of T2D using the prescribed therapy.

Current approaches to address PIR are largely educational, using classes and workshops to change attitudes and behavior; therefore, it is important to understand potential mechanisms by which effective patient-provider communication and relationships decrease PIR and whether the relationships are mediated by diabetes self-efficacy.

Based on the literature reviewed, we have the following hypotheses: (1) Each of diabetes attitude, diabetes knowledge, diabetes self-efficacy and patient-provider relationship is associated with PIR. (2) The relationship between patient-provider relationship and PIR is mediated by diabetes self-efficacy, where a better patient-provider relationship is associated with greater diabetes self-efficacy. (3) The mediating effect of diabetes self-efficacy would differ across gender and racial groups.

## 2. Methods

### 2.1 Sample and Setting

A descriptive correlational cross-sectional survey was conducted of 82 men and 96 women recruited from urban residential areas of the San Francisco Bay Area. The participants were recruited through flyers posted at the two adult general internal medicine clinics and at the Diabetes Teaching Center at the University of California, San Francisco, two local community clinics and three churches. Ethical approval for the study was obtained from University Institutional Review Board, and all participants provided written informed consent. Inclusion criteria were as follows: 18 years or older, diagnosed with T2D, being treated with diabetic oral agents, and able to speak English. Patients with the following conditions were excluded: type 1 diabetes, severe psychiatric disease, such as active schizophrenia and drug dependency, dementia or on current insulin treatment were excluded. Data were collected by face-to-face interview in doctors' offices or phone interview and medical records were reviewed for clinical data related to diabetes.

### 2.2 Variables and Measures

**Demographic and biomedical data**—Demographic data were obtained by patient self-report. HbA1c level (the most recent value within the last 4 months), chronic disease comorbidities (e.g. congestive heart failure, chronic obstructive pulmonary disease, or arthritis)

and diabetes-related complications (nephropathy, retinopathy, neuropathy) were obtained from the patient's self-report and medical records.

**Diabetes attitude**—Attitude toward diabetes was measured with the Diabetes Attitude Scale (DAS-3)(Anderson, Fitzgerald, Funnell, & Gruppen, 1998). The DAS-3 is a self-reported measure whose items are scored on a five-point Likert scale that ranges from “strongly disagree” (scored 1) to “strongly agree” (scored 5). A high score reflects positive attitudes toward diabetes. The possible score of each subscale ranges from 1 to 5; it is calculated by summing the score and dividing by the total number of items in that subscale. The five subscales are as follows: Need for special training to provide diabetes care (5 items), Seriousness of type 2 diabetes (7 items), Values of tight control (7 items), Psychosocial impact of diabetes (6 items), and Patient autonomy (8 items). The internal consistency reliability for this study as measured by Cronbach's alpha coefficient was 0.78.

**Diabetes knowledge**—Knowledge was measured with the validated Diabetes Knowledge Test (DKT)(Fitzgerald et al., 1998). The DKT has two components: a 14-item general test and a 9-item insulin use subscale. Only the 14-item general test was administered to these participants. The test is scored as a percentage of questions answered correctly.

**Diabetes self-efficacy**—Self-efficacy was measured with the Diabetes Self-Efficacy Scale

(DSES)(Rapley, Passmore, & Phillips, 2003). The response options are rated on a Likert scale ranging from 1 (strongly agree) to 6 (strongly disagree). The 13 positively worded items are reverse-scored, so higher scores indicate a higher level of self-efficacy. The range of possible scores is 1 to 6. Either the total scale score or the following five subscales scores can be used: Diabetic routine (4 items), Self-treatment (5 items), Certainty about self-care (4 items), Diet (3 items), and Exercise (2 items). Cronbach's alpha internal consistency reliability coefficient for this study was 0.84.

**Provider-patient relationship**—Provider-patient relationship was measured with the Interpersonal Processes of Care Survey-18 (IPC-18)(Stewart, Napoles-Springer, & Perez-Stable, 1999). Respondents reported on the care they had received from their providers over the past 12 months. The measurement included three broad domains: communication, decision making, and interpersonal style; each has several subdomains. Communication has three subscales (lack of clarity, elicited concerns, and explained results). Decision making has one subscale (worked together) and interpersonal style has three subscales (provider's compassionate and respectful interpersonal style, discrimination due to race/ethnicity, and disrespectful office staff). For each item, respondents are asked how often that type of care had been provided using a five-point scale (1, never; 2, rarely; 3, sometimes; 4, usually; 5, always). Higher scores indicate “better” processes (e.g., decided together). The items that are worded negatively (e.g., lack of clarity) were reversed prior to summary scoring. Internal consistency reliability for this study was 0.88.

**Psychological insulin resistance (PIR)**—PIR was measured with the Barriers to Insulin Treatment (BIT)(Petra et al., 2007). The BIT scale measures various aspects of

psychological barriers to insulin treatment and attitude toward insulin treatment in T2D patients. The BIT questionnaire includes 14 items. Each item is measured with a 10-point numerical rating scale with the following five subscales: Fear of injection and self-testing, Expectations regarding positive insulin-related outcomes, Expected hardship from insulin treatment, Stigmatization by insulin injection, and Fear of hypoglycemia. The numerical values for a set of items in a particular subscale are added and the total is divided by the number of items in the subscale. The resulting value is the score for that subscale. An overall score for the BIT can be calculated by adding all of the item scores and dividing by 14. The coefficient alpha values for this study was 0.88.

### 2.3 Data analysis

Descriptive statistics, univariate and bivariate analyses, and multiple linear regression were performed using Statistical Package for the Social Science (SPSS). All hypothesis testing was 2-sided; type I error was controlled at the 0.05 level. To analyze the mediating effect of diabetes self-efficacy, descriptive statistics, Pearson's correlation, and path diagram were carried out using SPSS and Analysis of Moment Structure (AMOS) software.

Mediation occurs when  $X$  (referring to the exogenous causal influence) is significantly related to  $M$  (referring to mediator or endogenous causal influence),  $M$  is significantly related to  $Y$  (referring to the dependent variable), and the relationship of  $X$  to  $Y$  diminishes when  $M$  is in the model (Baron & Kenny, 1986). Correlation structure among the three variables using Pearson's correlation  $r$  was calculated to check if the first prerequisite for mediation effect was established. If this correlational structure is observed, a mediation analysis will provide support for mediation. Then, a structure equation model (SEM) with a bootstrapping approach was used to test whether diabetes self-efficacy mediated the relationship between IPC and BIT. A mediating effect was found when the association between the variables in the SEM became reduced or disappeared as the mediating variables are introduced into the equation. If the effect of  $X$  on  $Y$  was no longer significant after controlling for  $M$ , complete mediation was inferred. If the direct effect of the mediator construct,  $M$ , accounted for a significant amount of variance in  $Y$ , but  $XY$  path remained significant, a partial mediated relationship was indicated.

The model fit was performed using the AMOS program to confirm the models. Chi-square goodness-of-fit ( $\chi^2/df$ ), normed fit index (NFI), root mean square error of approximation (RMSEA), standardized root mean square residual (SRMR), and comparative fit index (CFI) were applied to estimate the model fit. The chi-square goodness-of-fit can test the difference between the observed covariance matrix and the one predicted by the specified model; however this index is sensitive to sample size; therefore, the relative goodness-of-fit indices such as NFI, CFI, and SRMR are strongly recommended (Bentler, 1990). The low value of chi-square with non-significance indicates that the hypothesized model is a good fit (Schaufeli, Salanova, González-romá, & Bakker, 2002). An acceptable fit of other indices were the RMSEA 0.10, NFI 0.80, CFI 0.80, and SRMR 0.08 (Hu & Bentler, 1999).

### 3. Results

#### 3.1 Demographics of participants

The characteristics of participants (n=178) are presented in Table 1. Mean age of participants was 64.3 years and gender 54% females. The ethnically diverse sample included 32.6% Asians, 31.5% Whites, 25.3% African Americans and 10.6% others. The mean HbA1c level was 6.98% (SD = 0.99; range = 5.2 to 11.0). There were no significant differences in HbA1c level by different racial groups. Mean duration of diabetes diagnosis was 7.03 ( $\pm$  4.07) years. All participants were taking diabetes oral medication.

#### 3.2 Correlations among variables

Test the correlation matrix among variables is described in Table 2. BIT was negatively correlated with DSES ( $r=-.294$ ,  $p<0.001$ ) and IPC ( $r=-.409$ ,  $p<0.001$ ). DSES was positively correlated with IPC ( $r=.292$ ,  $p<0.001$ ); however, no significant correlations were found in our study between BIT and HbA1c ( $r=.025$ ,  $p=.755$ ), between BIT and DAS ( $r=-.032$ ,  $p=.673$ ), or between BIT and DKT ( $r=.035$ ,  $p=.642$ ). Therefore, the first prerequisite for mediation analysis was met among three variables such as DSES, IPC and BIT but not among DAS and DKT.

#### 3.3 Mediation Analysis

The path model with direct standardized coefficients is shown in Figure 1. The direct standardized effect of IPC on BIT was  $-.40$  ( $p = 0.008$ ), indicating that participants with better patient-provider relationship are directly associated with fewer barriers to insulin treatment. The direct effect model fit indices included chi-square goodness-of-fit ( $\chi^2/df$ ) (1.929), RMR (1.304), NFI (0.834), RMSEA (0.072), CFI (0.873), and SRMR (0.078) (Table 3).

An indirect effect between IPC and BIT was identified in the path diagram. As shown in Figure 2, the standardized indirect effect of IPC on BIT mediated by self-efficacy was  $-.27$  ( $p = .003$ ), indicating that better patient-provider relationship that reduces PIR is in part due to greater diabetes self-efficacy. Better perceived patient-provider relationship was associated with greater diabetes self-efficacy ( $\beta = 0.39$ ,  $p = .007$ ). Participants who had greater self-efficacy perceived fewer barriers to insulin treatment ( $\beta = -0.34$ ,  $p = .002$ ). That is, a negative relationship between BIT and IPC remained significant after adjusting for diabetes self-efficacy and there was a significant reduction in magnitude ( $\beta$  reduction in magnitude from  $-0.40$  to  $-0.27$ ) predicting the negative relationship between BIT and IPC ( $\beta = -0.27$ ,  $p = .003$ ); therefore, diabetes self-efficacy partially mediated the prediction of barriers to insulin treatment by patient-provider relationship. Overall, the mediation model showed better fit compared to the direct model as with chi-square goodness of fit ( $\chi^2/df$ ) (1.689), NFI (0.784), RMSEA (0.062), CFI (0.896), and SRMR (0.073) (Table 3).

Our findings did not support the hypothesis that the mediating effect of diabetes self-efficacy on PIR would differ across gender and racial groups. That is, there was no significant moderating effect of gender and race groups.

## 4. Discussion

The findings from our study show that better patient-provider relationship is associated with lower PIR and that patients' diabetes self-efficacy partially mediates the relationship between patient-provider relationship and PIR. Studies have shown that effective patient-provider relationship and communication affect patient's psychosocial and biomedical outcomes (Ciechanowski et al., 2001; Heisler et al., 2002; Schillinger et al., 2003). Yet, the mechanism in the patient-provider relationship and PIR has been unknown. There may be several pathways to explain our findings in the role of diabetes self-efficacy between patient-provider relationship and PIR. With the findings from our study, we argue that some healthcare providers may convey more effective message to patients about how to practice diabetes self-care, or provide better emotional and informational support to patients than other providers and in turn increase patient's diabetes self-efficacy. Patients with high self-efficacy will be more persistent in the face of obstacles (Bandura, 1977); that is, patients with strong self-efficacy in their own ability to manage diabetes may feel they can also handle insulin treatment and have low insulin-related distress through diabetes self-efficacy.

A low level of self-efficacy is shown to be associated with either overprotection or lack of support (Schokker et al., 2011). For example, in a study of the role of overprotection by the partner in coping with diabetes, the relationship between overprotection and diabetes self-efficacy was stronger for patients with worse glycemic control, implying that in patients with poor glycemic control, overprotection by a partner is more strongly associated with self-efficacy than in patients with good glycemic control (Schokker et al., 2011). HbA1c in most of our study sample, however, showed that their diabetes was under good control with their oral medication and was not associated with the BIT score; therefore, we did not see additional moderating effect of glucose control. Future study including more patients with poorly controlled diabetes may be helpful to understand whether the relationship between patient-provider relationship and PIR would apply more strongly for patients with worse glycemic control by interacting with the patients' self-efficacy.

Diabetes knowledge was not associated with either diabetes self-efficacy, patient-provider relationship, or patients' PIR. Studies that examined the relationship between diabetes knowledge and adherence to self-care behaviors have shown mixed findings (Holmstrom & Rosenqvist, 2005; Murata et al., 2003; Pace, Ochoa-Vigo, Caliri, & Fernandes, 2006), indicating that having better diabetes knowledge does not always lead to better patient diabetes self-care behaviors.

Studies have shown that patients who have positive attitudes toward managing their diabetes are more likely to change their behavior in order to control their blood glucose levels than those with negative attitudes (Farmer, Kinmonth, & Sutton, 2006; Nam, Chesla, Stotts, Kroon, & Janson, 2011). In our study, the diabetes attitude was not associated with PIR. Our findings may stem from the instrument that measured diabetes attitude that included the following aspects: value of tight diabetes control, seriousness of diabetes, or psychosocial impact of diabetes. For example, participants who value the importance of diabetes control and take diabetes as a serious illness may think that insulin treatment is necessary. At the same time, the participants PIR may also anticipate more psychosocial impact from using

insulin. Therefore, these conflicting attitudes may contribute to the strength of association between diabetes attitude and PIR toward the null.

Women have been found to report more diabetes-related distress than men (Fisher et al., 2008; Helgeson & Novak, 2007). Studies have shown that women tend to be affected or rely on interpersonal relationship-oriented aspects such as support from others and interpersonal relationships have a stronger impact on illness perception among women compared to men (Kawachi & Berkman, 2001). In our previous study, women also had more fear of insulin injection than men (Nam et al., 2010); therefore, we hypothesized that the association between patient-provider relationship and PIR is stronger for women. The findings concluded by the moderating analysis, however, contradicted our hypothesis of the group difference by gender and race.

There are several limitations in the current study. Although the study sample includes various ethnic/racial groups, these data from a small convenience sample, whose diabetes is relatively under control, may not accurately represent individuals with T2D and are not of sufficient sample size to test multiple hypotheses. Patients with high HbA1c may have lower PIR than those who with better diabetes control by seeking more effective diabetes treatment after experiencing the effect of oral agents. Therefore our study may not generalize to patients with severe diabetes or diabetes complications. Another limitation is that the cross-sectional study design cannot establish a causal relationship between patient-provider relationship and self-efficacy. For example, whether ineffective patient-provider relationship contributes to poor diabetes self-efficacy or whether patients with poorer diabetes self-efficacy may perceive their relationship with healthcare providers as less effective and may feel that they receive insufficient support from healthcare providers which they needed, including the skills and knowledge that insulin treatment requires. Despite the limitations, the findings from this study provide an important insight on which factor is needed to target to reduce PIR by examining a mediator in the relationship between patient-provider relationships and PIR, and can guide future intervention development for this population. Our study findings suggest that training and support for diabetes self-efficacy should be incorporated into diabetes self-management education. Directions for future research include developing interventions to improve diabetes self-efficacy based on various health behavior and chronic illness models. It is equally important to develop interventions that can provide healthcare providers with education and system support to better serve patients with complicated chronic illnesses such as T2D.

## 5. Conclusion

This study demonstrates that self-efficacy is a mediator of the relationship between patient-provider relationships and PIR. This finding has important clinical implications as interventions are designed to improve self-efficacy among individuals with T2D for optimal glucose control by introducing insulin in a timely manner. It also suggests the need for more attention on the role of healthcare providers, specifically the importance of their communication style, and support in bolstering patients' self-efficacy and decreasing barriers to insulin treatment.



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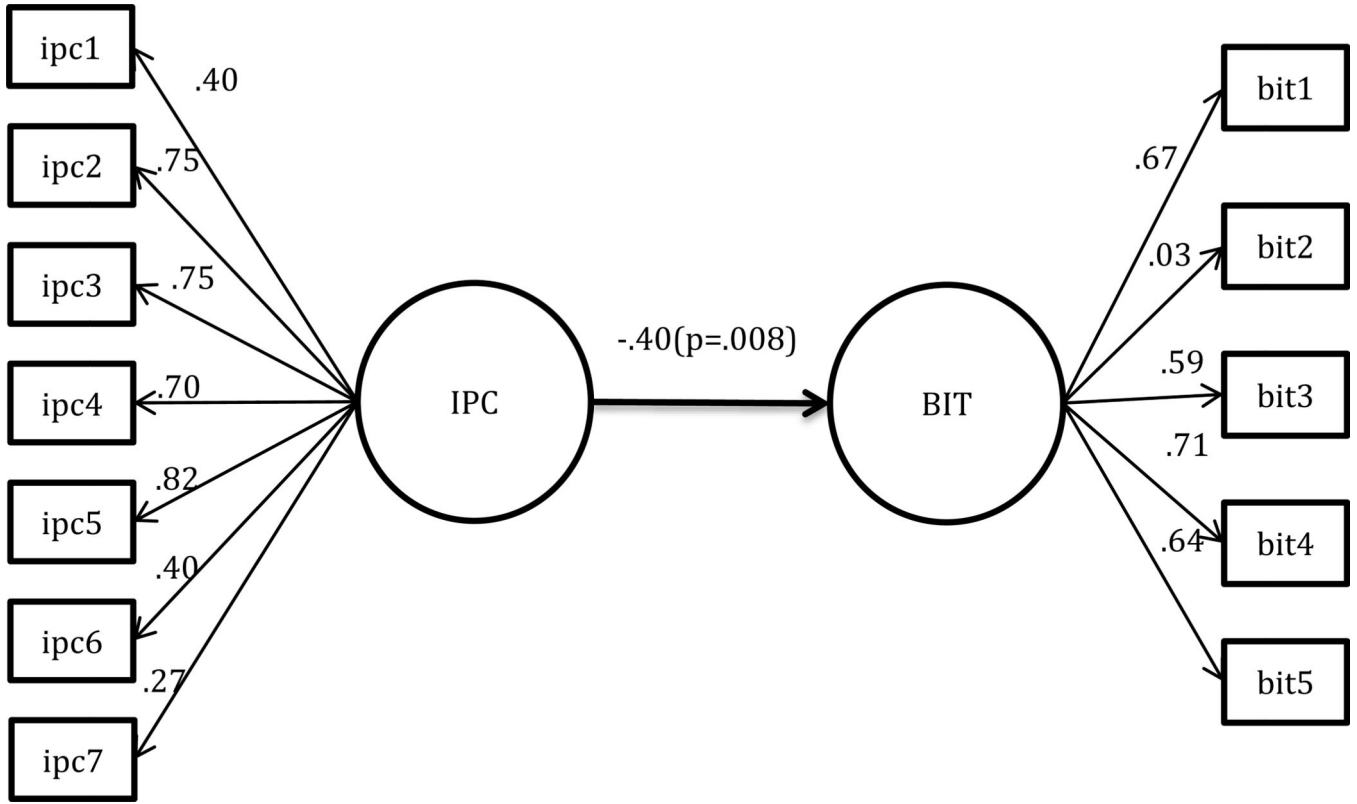
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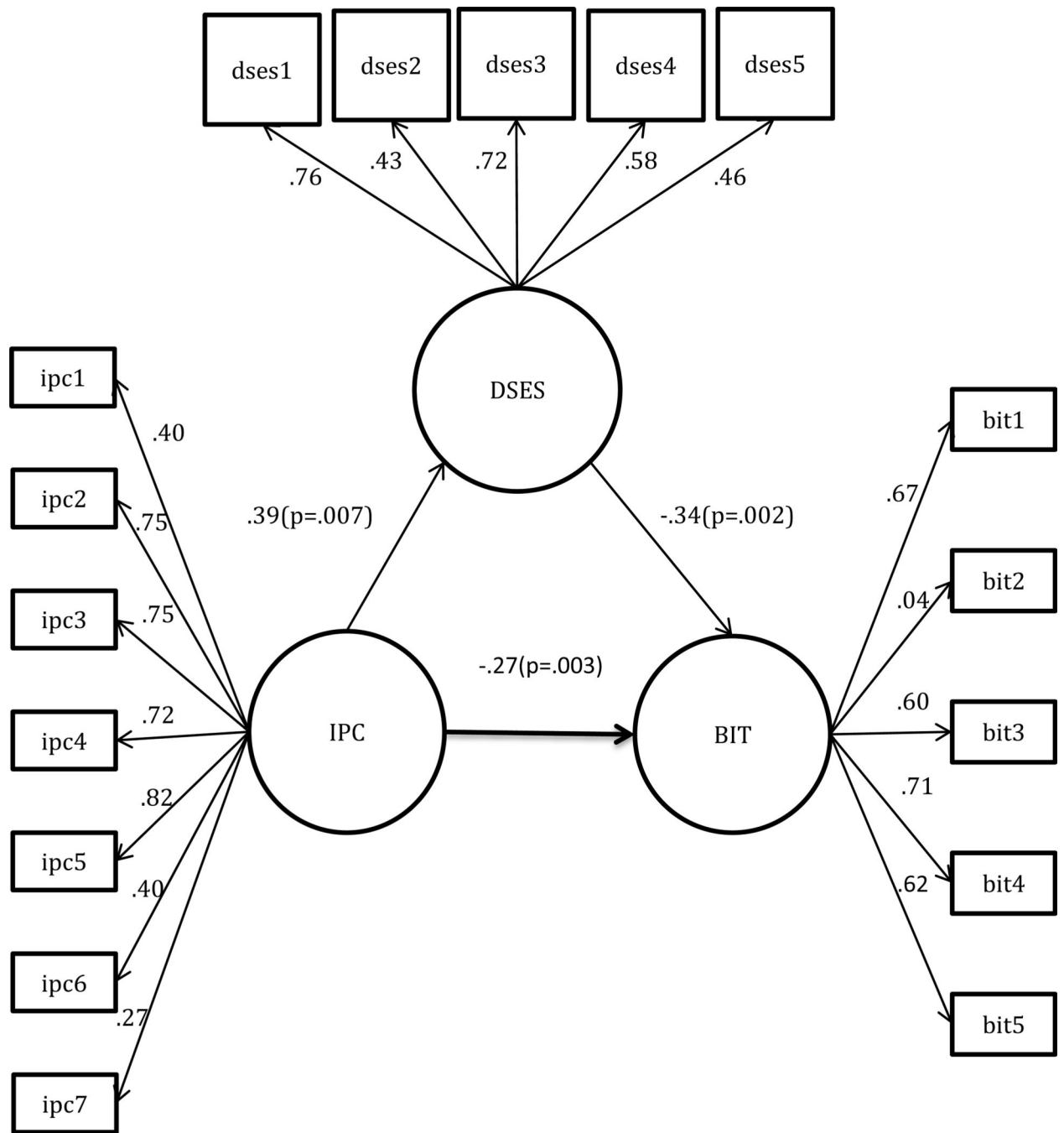
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**Figure 1.**  
 Direct Path Model predicting Barriers to Insulin Treatment (BIT)  
 Interpersonal Processes of Care Survey (IPC)  
 ipc 1: Communication, Lack of clarity  
 ipc 2: Communication, Elicited concern  
 ipc 3: Communication, Explained results  
 ipc 4: Decision making, Worked together  
 ipc 5: Interpersonal style, Compassionate, respectful  
 ipc 6: Interpersonal style, Discriminated due to race/ethnicity  
 ipc 7: Interpersonal style, disrespectful office staff  
 Barriers to Insulin Treatment (BIT)  
 bit1: Fear of injection  
 bit 2: Expectations regarding positive outcome  
 bit 3: Expected hardship  
 bit 4: Stigmatization  
 bit 5: Fear of hypoglycemia



**Figure 2.** Standardized Path Estimates for the Mediating Impact of Diabetes Self-Efficacy (DSES) Interpersonal Processes of Care Survey (IPC)  
 ipc 1: Communication, Lack of clarity  
 ipc 2: Communication, Elicited concern  
 ipc 3: Communication, Explained results  
 ipc 4: Decision making, Worked together  
 ipc 5: Interpersonal style, Compassionate, respectful

ipc 6: Interpersonal style, Discriminated due to race/ethnicity

ipc 7: Interpersonal style, disrespectful office staff

Barriers to Insulin Treatment (BIT)

bit1: Fear of injection

bit 2: Expectations regarding positive outcome

bit 3: Expected hardship

bit 4: Stigmatization

bit 5: Fear of hypoglycemia

Diabetes Self-Efficacy Scale (DSES)

dses 1: Diabetes routine

dses 2: Self-treat

dses 3: Certainty

dses 4: Diet

dses 5: Exercise

**Table 1**

Demographics of participants (n=178)

Characteristics		Mean ±SD	N (%)
Age	Range:	64.3 ± 13.54	
Gender	Female		96(53.9)
Race	Asians		58(32.6)
	Blacks		45(25.3)
	Whites		56(31.5)
	Others (American Indians or Alaska Natives, Native Hawaiian or Pacific Islander)		19(10.6)
Education	Less than high school		14 (7.9)
	High school graduate		36(20.2)
	Some college 1–3years		65(36.5)
	Bachelor’s degree		36(20.2)
	Graduate degree		27(15.2)
HbA1C*	Range: 5.2–11.0	6.98 ± 0.99	
Number of comorbidities	None		118(66.3)
	1		42 (23.6)
	2		7(3.9)
	3		1(0.6)
Number of microvascular diabetic complications <sup>‡</sup>	None		146(82.0)
	1		16(9.0)
	2		5(2.8)
	3		1(0.6)

HbA1C: glycosylated hemoglobin, \*n=158

<sup>‡</sup>n=168

Comorbidities: congestive heart failure, chronic obstructive pulmonary disease, and arthritis

**Table 2**

Correlation matrix among variables

r-value	BIT	DSES	IPC	DAS	DKT
BIT	-				
DSES	-.294**	-			
IPC	-.409**	.292**	-		
DAS	-.032	.057	-.047	-	
DKT	.035	.117	-.022	.445**	-

\*\* p<.001

BIT: Barriers to Insulin Treatment  
 DSES: Diabetes Self-Efficacy Scale  
 IPC: Interpersonal Process of Care  
 DAS: Diabetes Attitude Scales  
 DKT: Diabetes Knowledge



**Table 3**

Goodness of Fit Statistics for the Model 1 and Model 2

Model	$\chi^2$	df	p	$\chi^2/df$	NFI	RMSEA	SRMR	CFI
Direct Effect Model	102.244	53	<.01	1.929	0.834	0.072	0.078	0.873
Partial Mediation Model	195.908	116	<.01	1.689	0.784	0.062	0.073	0.896

RMR: Root Mean square Residual

NFI: Normed Fit Index

RMSEA: Root Mean Square Error of Approximation

SRMR: Standardized RMR

CFI: Comparative Fit Index